



The 2011 series of Master Food Preserver classes are finished but that doesn't mean food preservation activities stop until next year. Preserving food involves more than storing fresh fruits and vegetables from your summer garden.

Throughout the winter and spring we'll share seasonal information to help keep your food safe as short-term leftovers, long-term treasures, or gifts of your time and talent.

Enjoy!

## Black Licorice: Trick or Treat?

As it turns out, you really can overdose on candy—or, more precisely, black licorice.

Days before the biggest candy eating holiday of the year, the Food and Drug Administration (FDA) encourages moderation if you enjoy snacking on the old fashioned favorite.

So, if you're getting your stash ready for Halloween, here's some advice from FDA:

If you're 40 or older, eating 2 ounces of black licorice a day for at least two weeks could land you in the hospital with an irregular heart rhythm or arrhythmia.

FDA experts say black licorice contains the compound glycyrrhizin, which is the sweetening compound derived from licorice root. Glycyrrhizin can cause potassium levels in the body to fall. When that happens, some people experience abnormal heart rhythms, as well as high blood pressure, edema (swelling), lethargy, and congestive heart failure.

FDA's Linda Katz, M.D., says last year the agency received a report of a black licorice aficionado who had a problem after eating the candy. And several medical journals have linked black licorice to health problems in people over 40, some of whom had a history of heart disease and/or high blood pressure.

Katz says potassium levels are usually restored with no permanent health problems when consumption of black licorice stops.

Licorice, or liquorice, is a low-growing shrub mostly grown for commercial use in Greece, Turkey, and Asia. The National Institutes of Health (NIH) says the plant's root has a long history of use as a folk or traditional remedy in both Eastern and Western medicine. It has been used as a treatment for heartburn, stomach ulcers, bronchitis, sore throat, cough and some infections caused by viruses, such as hepatitis; however, NIH says there is insufficient data available to determine if licorice is effective in treating any medical condition.



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### Got a Food Preservation Question?

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## Black Licorice *Continued from page 1*

Licorice is also used as a flavoring in food. Many “licorice” or “licorice flavor” products manufactured in the United States do not contain any licorice. Instead, they contain anise oil, which has the same smell and taste. Licorice root that is sold as a dietary supplement can be found with the glycyrrhizin removed, resulting in a product known as deglycyrrhizinated licorice, or DGL, NIH says.



If you have a fondness for black licorice, FDA is offering this advice:

- No matter what your age, don't eat large amounts of black licorice at one time.
- If you have been eating a lot of black licorice and have an irregular heart rhythm or muscle weakness, stop eating it immediately and contact your healthcare provider.
- Black licorice can interact with some medications, herbs and dietary supplements. Consult a health care professional if you have questions about possible interactions with any drug or supplement you take.

If you've experienced any problems after eating licorice, contact the FDA [consumer complaint coordinator](#) in your area. This article appears on [FDA's Consumer Updates page](#), which features the latest on all FDA-regulated products.

<http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm277152.htm>

## Making Cranberry Mustard

*Sue Mosbacher, Master Food Preserver*

I've had fun making mustards this fall to give away as holiday gifts. (*If you're on my gift list, act surprised.*) I put my mustard in the small 1/4 pint jars. I'm going to give a “Three Mustardteers” gift basket with honey mustard, cranberry mustard, and mango mustard. I'm looking forward to putting the cranberry mustard on turkey sandwiches after Thanksgiving.

I use the following recipe to make a variety of fruit-based recipes; it's fast and easy. I made a mango version with a vibrant gold color and great taste. I keep several packages of frozen fruit so I can make more any time. The fruit mustards have an initial sweet taste followed by the pungent hit of mustard. Yum! And for my gluten intolerant friend, I used general purpose gluten free flour; it worked well!



*The Three Mustardteers: Honey Mustard, Cranberry Mustard, and Mango Mustard.*

### Cranberry Mustard

2 cups cranberry puree  
 1/2 cup dry mustard  
 1 cup cider vinegar  
 1/2 cup finely diced onion  
 1/2 cup sugar  
 1/4 cup flour  
 1/4 tsp turmeric

- In a bowl, combine mustard with sufficient water to make a smooth paste. Cover and let stand for 10 minutes.
- Combine remaining ingredients in a saucepan; bring to a boil and cook for 3 minutes.
- Remove from heat and whisk 1/4 cup of the mixture into mustard paste. Repeat until all ingredients are blended.
- Puree in a blender or food processor.
- Ladle into hot jars, leaving 1/4" headspace. Wipe jar rims clean. Place lids and rings on jars, tightening rings finger tight.
- Process 15 minutes in a boiling water bath, adjusting for altitude.

Yield: 3 1/2 pints

Altitude in feet	Increase processing time
1000 - 3000	5 minutes
3001 - 6000	10 minutes
6001 - 8000	15 minutes
8001 - 10000	20 minutes

## Wild Game Jerky

As hunting season gets underway, many foothill families enjoy fresh game. However, if the hunter has a good aim, these same families may find themselves with more meat than can be eaten at once. The extra game can always be frozen, but save some for making jerky. The following excerpts from a handout published by the **Oklahoma State University Cooperative Extension** give safety recommendations and a great explanation of how to make jerky from wild game:

### Jerkying Wild Game Meats

Jerky is a lightweight, dried meat that is a handy food for backpackers, campers and outdoor sports enthusiasts. It requires no refrigeration for short term storage. Jerky can be made from almost any lean meat, including venison.



Raw meats can be contaminated with microorganisms that cause disease. These harmful bacteria can easily multiply on moist, high protein foods like meat and poultry and can cause illness if the products are not handled correctly. When wild game is used to make jerky, the meat should be treated to kill the trichinella parasite before it is sliced and marinated. This parasite causes the disease trichinosis. To treat the meat, freeze a portion that is 6 inches or less thick at 0°F or below for at least 30 days. Note that freezing will not eliminate bacteria from the meat.

When preparing jerky from wild game, it is important to remember that the wound location and skill of the hunter can affect the safety of the meat. If the animal is wounded in such a way that the contents of its gut come in contact with the meat or the hunter's hands while dressing the meat, fecal bacteria can contaminate the meat. It is best to avoid making jerky from this meat and use it only in ways that it will be thoroughly cooked. Deer carcasses should be rapidly chilled to avoid bacterial growth. The risk of foodborne illness from home-dried jerky can be decreased by allowing the internal temperature of the meat to reach 160°F, but in such a way as to prevent case hardening. Two methods can be used: heating meat strips in marinade before drying or heating the dried jerky strips in an oven after the drying process is completed. Directions for both methods are below. When the strips are heated in a marinade before drying, drying times will be reduced. Color and texture will differ from traditional jerky.

### Follow these recommendations for safe handling of meat and poultry:

- Always wash hands thoroughly with soap and running water for at least 20 seconds before and after handling raw meats.
- Use clean equipment and utensils.
- Keep meat and poultry refrigerated at 40°F or below. Use ground beef and poultry within 2 days, red meats within 3 to 5 days or freeze for later use.
- Thaw frozen meat in the refrigerator, not on the kitchen counter.
- Marinate meat in the refrigerator. Do not save and re-use marinade.



### Preparing the Meat



Partially freeze meat to make slicing easier. The thickness of the meat strips will make a difference in the safety. Slice meat no thicker than 1/4 inch. Trim and discard all fat from meat because it becomes rancid quickly. If a chewy jerky is desired, slice with the grain. Slice across the grain if a more tender, brittle jerky is preferred. A tenderizer can be used according to package directions, if desired. The meat can be marinated for flavor and tenderness. Marinade recipes may include oil, salt, spices and acid ingredients such as vinegar, lemon juice, teriyaki, soy sauce or wine.

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## Wild Game Jerky *Continued from page 3*

### Jerky Marinade and Procedure

1 1/2 - 2 pounds of lean meat (beef, pork or venison)  
 1/4 cup soy sauce  
 1 tablespoon Worcestershire sauce  
 1/4 teaspoon each of black pepper and garlic powder  
 1/2 teaspoon onion powder  
 1 teaspoon hickory smoke-flavored salt

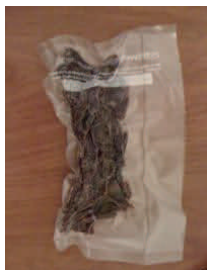


- Combine all ingredients. Place strips of meat in a shallow pan and cover with marinade. Cover and refrigerate 1-2 hours or overnight. Products marinated for several hours may be more salty than some people prefer.
- Heat meat prior to drying to decrease the risk of foodborne illness at end of marination time. Bring strips and marinade to boil and boil 5 minutes before draining and drying. Check the temperature of several strips with thermometer to determine that 160°F has been reached.
- Remove meat strips from marinade and drain on clean, absorbent towels. Arrange strips on dehydrator trays or cake racks placed on baking sheets for oven drying. Place slices close together, but not touching or overlapping. Place racks in dehydrator or oven preheated to 140°F.
- Dry until test piece cracks but does not break when bent (10 to 24 hours for samples not heated in marinade). Samples heated in marinade will dry faster. Begin checking samples after 3 hours.
- Once drying is completed, pat off any beads of oil with clean, absorbent towels and cool. Remove strips from the racks. Cool.
- Package in glass jars or heavy plastic food storage bags. Vacuum packaging is also a good option.
- If strips were not heated in marinade prior to drying, they can be heated in an oven after drying as a safety measure. Place strips on baking sheet, close together, but not touching or overlapping. For strips originally cut 1/4- inch thick or less, heat 10 minutes in a preheated 275°F oven. (Thicker strips may require longer heating to reach 160°F.)

### Making Jerky from Ground Meat

Jerky can be made from ground meat using special presses to form or shape the product. Disease causing microorganisms are more difficult to eliminate in ground meat than in whole meat strips. (If ground meat is used, follow the general tips for safe handling of meat and poultry.) Be sure to follow the dehydrator manufacturer's directions when heating the product at the end of drying time. Again, an internal temperature of 160°F is necessary to eliminate disease-causing bacteria such as E. coli O157:H7, if present.

### Storing the Jerky



Package in glass jars with tight fitting lids or heavy plastic food storage bags. Vacuum packaging is also a good option. Pack jerky with the least possible amount of air trapped in the container. Too much air causes off-flavors and rancidity to develop. Label and date packages. Store containers in a cool, dry, dark place or the refrigerator or freezer. Properly dried jerky will keep approximately two weeks in a sealed container at room temperature. It will keep 3 to 6 months in the refrigerator and up to one year in the freezer.





## CDC Veggie of the Month: Greens

Greens seem to be the new superfood...full of fiber and lots of other good stuff. Some experts recommend eating plenty of greens every day as a way to maintain health. The Center for Disease Control (CDC) highlights greens this month on its Fruits and Veggies Matter website. Here is an excerpt from that site:

### Availability, Selection, and Storage

#### Collard Greens



Though available year-round, collard greens are at their peak from January through April. The best collards are found in crisp bunches with leaves still intact. Collards can also be found canned. Fresh collards should be stored in the crisper drawer of the refrigerator or in a plastic bag with holes in it.

#### Mustard Greens



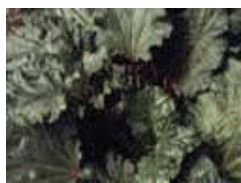
Mustard greens can be found year-round though they are at their peak from December through April. Mustard greens come in many different varieties and can be found dark, light, short, fat, smooth, curly etc. In the United States, the leaves on mustard greens are typically soft, green and oval-shaped, frilled at the edges (similar to romaine lettuce) and attached to long stems. When selecting these greens, be sure to avoid those that have yellow or brown leaves, dry leaves, or coarse, fibrous stems. If you plan to use the mustard greens for salad it is wise to pick very small leaves whereas any size leaves will do if you are cooking them. Mustard greens should be wrapped tightly in plastic and kept in the refrigerator. However, they only last a few days quickly becoming faded, dry and yellow.

#### Kale



Kale is available year-round though it is most flavorful and abundant during the winter months. It is best to select small, deep-colored kale bunches with clean leaves. Avoid kale with dry leaves as well as that with dry, browned, yellowed or coarse stems. In the marketplace kale should be kept refrigerated or on ice (or in an outdoor market in the winter). Best when kept at 32°, kale should be stored wrapped in plastic in the refrigerator crisper. Kale can only be kept for a few days.

#### Swiss Chard



Swiss chard is available from spring through the fall with a peak from June through October. Choose swiss chard that has crisp stalks and firm, bright leaves. Like other greens, chard should be wrapped in plastic and can be kept in the refrigerator for approximately 2 days. If blanched, swiss chard greens can be frozen. Boil greens for 2 minutes, drain, chill in ice water and drain again and pack in an airtight container.

#### Broccoli Rabe



Broccoli rabe is available year-round (with the exception possibly being June and July) though its peak season is between late fall and early spring. It is grown in Quebec, California, Arizona, and other states. Broccoli rabe can be found in a refrigerator case sprinkled with ice because it wilts very easily. When selecting this vegetable, choose firm, green, small stems with compact heads and flower buds that are tightly closed and dark green, not open or yellow. Broccoli rabe should be stored in a refrigerator crisper unwashed, either wrapped in a wet towel or in a plastic bag for a maximum of three days. To keep it longer, blanch and freeze it.

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## Free Pressure Canner Gauge Testing



A pressure canner is essential for canning low-acid vegetables, meats, fish and poultry. If you have a dial gauge pressure canner, the gauge should be tested for accuracy before each canning season. UC Cooperative Extension Master Food Preservers in El Dorado County offers free gauge testing **by appointment** at our office at 311 Fair Lane, Placerville.

**Call 530-621-5506 to make an appointment.**

## CDC Veggie of the Month: Greens *Continued from page 4*

### Preparation

Prior to cleaning greens, any wilted or yellow leaves should be removed. Next, dunk greens into a bowl of tepid water a few times to clean. Drain and use a salad spinner to dry greens for use in salads. For use in cooking, it is not necessary to completely dry leaves.

Traditionally, greens are boiled or simmered very slowly with a piece of ham hock for an extended period of time until they are quite soft. This softens the texture and decreases some of their bitter flavor. Greens can also be steamed, microwaved, added to soups, salads, stews, and other dishes.

To decrease the bitterness of greens, blanch them in boiling water for approximately one minute prior to cooking (though this does diminish some of their nutritional value), the color, flavor and texture will be preserved. Greens can then be sautéed (do not use aluminum or iron pans), or added to various dishes during cooking.

Broccoli rabe is very bitter when raw so it is recommended to cook this vegetable.

### Curried Mustard Greens & Garbanzo Beans with Sweet Potatoes

Makes 4 servings. Each serving equals 1 cup of fruit or vegetables

#### Ingredients

2 medium sweet potatoes peeled and sliced thin  
 1 medium onion cut in half and sliced thin  
 2 medium cloves garlic, sliced  
 ½ cup + 1 Tbsp chicken or vegetable broth  
 ½ tsp curry powder  
 ¼ tsp turmeric  
 2 cups chopped and rinsed mustard greens  
 1 15 oz can sodium free diced tomatoes  
 1 15 oz can garbanzo beans, drained  
 2 Tbsp extra virgin olive oil  
 salt and white pepper to taste



1. Wash work surfaces and hands thoroughly before handling food.
2. Steam peeled and sliced sweet potatoes for approximately 5–8 minutes.
3. While steaming potatoes, slice onion and garlic. Heat 1 Tbsp broth in 12 inch skillet. Sauté onion in broth over medium heat for about 4–5 minutes stirring frequently, until translucent. Add garlic, curry powder, turmeric, and mustard greens. Cook, stirring occasionally until mustard greens are wilted, about 5 minutes. Add garbanzo beans, diced tomatoes, salt and pepper. Cook for another 5 minutes.
4. Mash sweet potatoes with olive oil, salt and pepper. If you need to thin potatoes, add a little more broth. Serve mustard greens with mashed sweet potatoes.

## Hold the Raw Sprouts, Please

Lt. Cmdr. Rajal Mody, MD, MPH, U.S. Public Health Service

Outbreaks caused by eating contaminated sprouts--"sproutbreaks"--have occurred every year in the United States since at least 1995. These episodes have taught us that sprouts are a risky food to eat.

Sprouts were found to be the cause of a devastating outbreak of Shiga toxin-producing *E coli* infections in Europe this summer. Ultimately, this outbreak caused more than 4,000 illnesses, more than 900 cases of hemolytic uremic syndrome, and 50 deaths.



Why are sprouts a risky food, you might ask? Some people think of them as the ultimate healthy food -- fresh and natural. In fact, raw sprouts can be anything but safe. Lessons from outbreaks have taught us that it is a good idea for people who want to lower their risk for food poisoning to cook raw sprouts or avoid eating them raw.

Here is what we have learned:

### **Lesson 1: A sprouted seed is a perfect vehicle for pathogens.**

A sprouting seed offers an inviting and nourishing environment as bacteria like *Salmonella* or *E coli* could want--and the warm, moist conditions in which sprouts are produced only make matters worse. A single *Salmonella* organism on the outside of a seed can easily grow to an infectious dose after it has sprouted. The bacteria in or on growing sprouts cannot be washed off. Because even a low dose of Shiga toxin-producing *E coli* can make you sick, sprouts are a powerful vehicle for transmitting illness. Sprouts have also been the vehicle for *Listeria*, which causes a very dangerous infection for pregnant women and the elderly.

### **Lesson 2: Sprouts have caused many outbreaks of illness.**

Since sprouts were first recognized as a source of food poisoning in the mid-1990s, they have become one of the "usual suspects" that foodborne disease epidemiologists look for when investigating an *E coli* or *Salmonella* outbreak. Since 1998, more than 30 outbreaks have been reported to the Centers for Disease Control and Prevention (CDC), due to many different kinds of sprouts -- alfalfa, bean, clover, and others. In fact, CDC's foodborne disease surveillance systems have identified three sprouts-associated outbreaks since June of 2010 that spread across multiple states.

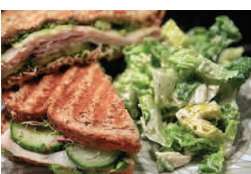
### **Lesson 3: It is difficult to grow "safe" sprouts.**

Once the potential dangers of sprouts became known, the U.S. Food and Drug Administration (FDA) developed guidance to help sprout growers reduce the risk of germs contaminating sprouts they produce and sell. Many sprouts growers now use practices to decontaminate seeds before sprouting, but no available method has proved completely effective. People who eat raw sprouts, including those who grow their own sprouts, ought to know that they are taking a risk, because contamination typically starts with the seed.

### **Lesson 4: Sprouts can make even young and healthy people ill.**

This is one of the biggest lessons learned from the outbreak in Europe in 2011 and from our experience with outbreaks in this country. Sproutbreaks in the United States mainly affect healthy people aged 20-49 years. A typical victim may be an especially health conscious person in the prime of life. But illnesses from sprouts can be particularly severe in vulnerable populations, such as young children, older adults, pregnant women, and people with compromised immunity.

### **Lesson 5: It can be hard for those who become ill to remember having eaten sprouts.**



We have found in our investigations that people often do not remember having eaten sprouts, because they are often just a garnish or one of many ingredients in a food dish. It is not necessary to eat large quantities of sprouts to get sick. An ill person's inability to accurately recall what they ate sometimes makes it difficult to pinpoint an outbreak of sprouts.

## The Curious Canner



**Question:** What types of jars are best to use when canning?

**Answer:** Glass Mason-type, threaded, home canning jars with two piece self sealing lids are the recommended choice for canning. They are available in a variety of sizes and styles. The standard jar mouth opening is about 2 inches and the wide mouth jar opening is about 3 inches. They vary in size from half-pint to half-gallon. With careful use and handling, canning jars may be reused many times, requiring only new lids each time.

**Question:** May I can fruit without adding sugar?

**Answer:** Yes, you may can fruit without adding sugar. It is safe to can fruits without sugar using the same processing time you would when using sugar. For the covering liquid you may use either water or fruit juice. However, sugar does help canned fruit hold their flavor, shape and color. The sugar also moves into the fruit tissue and keeps it firmer. When sugar is added it is usually added as a syrup; from very light syrup to very heavy syrup, depending on the quantity of water to sugar ratio.

**Question:** My mother always canned by the open kettle method. Why isn't that method taught in the MFP classes?

**Answer:** In this method, the food is cooked in an ordinary pot, then packed into hot jars and sealed without processing. Temperatures in open kettle canning may not be high enough to destroy spoilage organisms that may be in the food. Spoilage bacteria may also enter the food while being transferred from the pot to the jar. This method is not a recommended safe home food preservation method.

Have a question for the Master Food Preservers? Submit a question either online at <http://ucanr.org/edmf> or by email at [edmf@ucdavis.edu](mailto:edmf@ucdavis.edu). Happy canning and preserving to all!

### Master Food Preserver Winter Services:

- Food preservation hotline
- Free pressure canner testing
- Speakers for custom training for your organization
- Weekly articles in the Mt. Democrat newspaper

*Preserving Times* is published by the El Dorado County Master Food Preservers.  
Editor: Ora Emmerich

*Do you know someone who would like to receive our newsletters and notifications on upcoming classes and events? Sign up online at <http://ucanr.org/mfpenews>.*

### Master Gardener Classes

Join our fellow educators at a Master Gardener class. For full class descriptions, go to [http://ucanr.org/sites/EDC\\_Master\\_Gardeners](http://ucanr.org/sites/EDC_Master_Gardeners).

#### November

- 5: Roses—Selection & Planting  
*Location: Veterans Memorial Building*
- 19: Berries  
*Location: Veterans Memorial Building*



#### December

- 3: Selection and Planting of Fruit Trees  
*Location: Gov Center Hearing Room, Building C*
- 10: African Violets  
*Location: Bethell-Delfino Agriculture Building*



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